

No.

200300324



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

*Rusch Agricultural Resources, Inc.*

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED, (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, 1543, 1544, 1545, 1546, 1547, 1548, 1549, 1550, 1551, 1552, 1553, 1554, 1555, 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566, 1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577, 1578, 1579, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588, 1589, 1590, 1591, 1592, 1593, 1594, 1595, 1596, 1597, 1598, 1599, 1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686, 1687, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1708, 1709, 1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764, 1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786, 1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1799, 1800, 1801, 1802, 1803, 1804, 1805, 1806, 1807, 1808, 1809, 1810, 1811, 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 2681, 2682, 2683, 2684, 2685, 2686, 2687, 2688, 2689, 2690, 2691, 2692, 2693, 2694, 2695, 2696, 2697, 2698, 2699, 2700, 2701, 2702, 2703, 2704, 2705, 2706, 2707, 2708, 2709, 2710, 2711, 2712, 2713, 2714, 2715, 2716, 2717, 2718, 2719, 2720, 2721, 2722, 2723, 2724, 2725, 2726, 2727, 2728, 2729, 2730, 2731, 2732, 2733, 2734, 2735, 2736, 2737, 2738, 2739, 2740, 2741, 2742, 2743, 2744, 2745, 2746, 2747, 2748, 2749, 2750, 2751, 2752, 2753, 2754, 2755, 2756, 2757, 2758, 2759, 2760, 2761, 2762, 2763, 2764, 2765, 2766, 2767, 2768, 2769, 2770, 2771, 2772, 2773, 2774, 2775, 2776, 2777, 2778, 2779, 2780, 2781, 2782, 2783, 2784, 2785, 2786, 2787, 2788, 2789, 2790, 2791, 2792, 2793, 2794, 2795, 2796, 2797, 2798, 2799, 2800, 2801, 2802, 2803, 2804, 2805, 2806, 2807, 2808, 2809, 2810, 2811, 2812, 2813, 2814, 2815, 2816, 2817, 2818, 2819, 2820, 2821, 2822, 2823, 2824, 2825, 2826, 2827, 2828, 2829, 2830, 2831, 2832, 2833, 2834, 2835, 2836, 2837, 2838, 2839, 2840, 2841, 2842, 2843, 2844, 2845, 2846, 2847, 2848, 2849, 2850, 2851, 2852, 2853, 2854, 2855, 2856, 2857, 2858, 2859, 2860, 2861, 2862, 2863, 2864, 2865, 2866, 2867, 2868, 2869, 2870, 2871, 2872, 2873, 2874, 2875, 2876, 2877, 2878, 2879, 2880, 2881, 2882, 2883, 2884, 2885, 2886, 2887, 2888, 2889, 2890, 2891, 2892, 2893, 2894, 2895, 2896, 2897, 2898, 2899, 2900, 2901, 2902, 2903, 2904, 2905, 2906, 2907, 2908, 2909, 2910, 2911, 2912, 2913, 2914, 2915, 2916, 2917, 2918, 2919, 2920, 2921, 2922, 2923, 2924, 2925, 2926, 2927, 2928, 2929, 2930, 2931, 2932, 2933, 2934, 2935, 2936, 2937, 2938, 2939, 2940, 2941, 2942, 2943, 2944, 2945, 2946, 2947, 2948, 2949, 2950, 2951, 2952, 2953, 2954, 2955, 2956, 2957, 2958, 2959, 2960, 2961, 2962, 2963, 2964, 2965, 2966, 2967, 2968, 2969, 2970, 2971, 2972, 2973, 2974, 2975, 2976, 2977, 2978, 2979, 2980, 2981, 2982, 2983, 2984, 2985, 2986, 2987, 2988, 2989, 2990, 2991, 2992, 2993, 2994, 2995, 2996, 2997, 2998, 2999, 3000, 3001, 3002, 3003, 3004, 3005, 3006, 3007, 3008, 3009, 3010, 3011, 3012, 3013, 3014, 3015, 3016, 3017, 3018, 3019, 3020, 3021, 3022, 3023, 3024, 3025, 3026, 3027, 3028, 3029, 3030, 3031, 3032, 3033, 3034, 3035, 3036, 3037, 3038, 3039, 3040, 3041, 3042, 3043, 3044, 3045, 3046, 3047, 3048, 3049, 3050, 3051, 3052, 3053, 3054, 3055, 3056, 3057, 3058, 3059, 3060, 3061, 3062, 3063, 3064, 3065, 3066, 3067, 3068, 3069, 3070, 3071, 3072, 3073, 3074, 3075, 3076, 3077, 3078, 3079, 3080, 3081, 3082, 3083, 3084, 3085, 3086, 3087, 3088, 3089, 3090, 3091, 3092, 3093, 3094, 3095, 3096, 3097, 3098, 3099, 3100, 3101, 3102, 3103, 3104, 3105, 3106, 3107, 3108, 3109, 3110, 3111, 3112, 3113, 3114, 3115, 3116, 3117, 3118, 3119, 3120, 3121, 3122, 3123, 3124, 3125, 3126, 3127, 3128, 3129, 3130, 3131, 3132, 3133, 3134, 3135, 3136, 3137, 3138, 3139, 3140, 3141, 3142, 3143, 3144, 3145, 3146, 3147, 3148, 3149, 3150, 3151, 3152, 3153, 3154, 3155, 3156, 3157, 3158, 3159, 3160, 3161, 3162, 3163, 3164, 3165, 3166, 3167, 3168, 3169, 3170, 3171, 3172, 3173, 3174, 3175, 3176, 3177, 3178, 3179, 3180, 3181, 3182, 3183, 3184, 3185, 3186, 3187, 3188, 3189, 3190, 3191, 3192, 3193, 3194, 3195, 3196, 3197, 3198, 3199, 3200, 3201, 3202, 3203, 3204, 3205, 3206, 3207, 3208, 3209, 3210, 3211, 3212, 3213, 3214, 3215, 3216, 3217, 3218, 3219, 3220, 3221, 3222, 3223, 3224, 3225, 3226, 3227, 3228, 3229, 3230, 3231, 3232, 3233, 3234, 3235, 3236, 3237, 3238, 3239, 3240, 3241, 3242, 3243, 3244, 3245, 3246, 3247, 3248, 3249, 3250, 3251, 3252, 3253, 3254, 3255, 3256, 3257, 3258, 3259, 3260, 3261, 3262, 3263, 3264, 3265, 3266, 3267, 3268, 3269, 3270, 3271, 3272, 3273, 3274, 3275, 3276, 3277, 3278, 3279, 3280, 3281, 3282, 3283, 3284, 3285, 3286, 3287, 3288, 3289, 3290, 3291, 3292, 3293, 3294, 3295, 3296, 3297, 3298, 3299, 3300, 3301, 3302, 3303, 3304, 3305, 3306, 3307, 3308, 3309, 3310, 3311, 3312, 3313, 3314, 3315, 3316, 3317, 3318, 3319, 3320, 3321, 3322, 3323, 3324, 3325, 3326, 3327, 3328, 3329, 3330, 3331, 3332, 3333, 3334, 3335, 3336, 3337, 3338, 3339, 3340, 3341, 3342, 3343, 3344, 3345, 3346, 3347, 3348, 3349, 3350, 3351, 3352, 3353, 3354, 3355, 3356, 3357, 3358, 3359, 3360, 3361, 3362, 3363, 3364, 3365, 3366, 3367, 3368, 3369, 3370, 3371, 3372, 3373, 3374, 3375, 3376, 3377, 3378, 3379, 3380, 3381, 3382, 3383, 3384, 3385, 3386, 3387, 3388, 3389, 3390, 3391, 3392, 3393, 3394, 3395, 3396, 3397, 3398, 3399, 3400, 3401, 3402, 3403, 3404, 3405, 3406, 3407, 3408, 3409, 3410, 3411, 3412, 3413, 3414, 3415, 3416, 3417, 3418, 3419, 3420, 3421, 3422, 3423, 3424, 3425, 3426, 3427, 3428, 3429, 3430, 3431, 3432, 3433, 3434, 3435, 3436, 3437, 3438, 3439, 3440, 3441, 3442, 3443, 3444, 3445, 3446, 3447, 3448, 3449, 3450, 3451, 3452, 3453, 3454, 3455, 3456, 3457, 3458, 3459, 3460, 3461, 3462, 3463

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

## APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER		3. VARIETY NAME	
BUSCH AGRICULTURAL RESOURCES, INC.		Z060Y018C		COLLINS	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)		5. TELEPHONE (include area code)		FOR OFFICIAL USE ONLY PVPO NUMBER <b>2003 00324</b>	
3515 E COUNTY ROAD 52 FORT COLLINS, CO 80524 USA		(970) 221-5622			
6. FAX (include area code)		7. GENUS AND SPECIES NAME		FILING DATE	
(970) 472-2334		HORDEUM VULGARE L.		August 25, 2003	
8. FAMILY NAME (Botanical)		9. CROP KIND NAME (Common name)		FILING AND EXAMINATION FEE:	
GRAMINEA		SPRING BARLEY		① 2450.00 ② 1202.00	
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name)		11. IF INCORPORATED, GIVE STATE OF INCORPORATION		DATE ① 8/25/03 ② 9/12/03	
CORPORATION		DELAWARE		CERTIFICATION FEE:	
12. DATE OF INCORPORATION		13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS		DATE	
01-01-1981		DR. LESLIE J. WRIGHT BUSCH AGRICULTURAL RESOURCES, INC. 3515 EAST COUNTY ROAD 52 FORT COLLINS, CO 80524 USA		(970) 221-5622	
14. TELEPHONE (include area code)		15. FAX (include area code)			
(970) 221-5622		(970) 472-2334			
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)					
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)					
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)					
YES <input checked="" type="checkbox"/> YES (If "yes," answer items 18 and 19 below) <b>MAH 8/16/2004</b> <input checked="" type="checkbox"/> NO (If "no," go to item 20)					
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?			19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?		
<input type="checkbox"/> YES <input type="checkbox"/> NO			<input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED		
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?					
<input type="checkbox"/> YES (If "yes," give names of countries and dates) <input checked="" type="checkbox"/> NO					
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.					
The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.					
Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF APPLICANT (Owner(s))			SIGNATURE OF APPLICANT (Owner(s))		
					
NAME (Please print or type)			NAME (Please print or type)		
Leslie J. Wright			GARY BOVARD		
CAPACITY OR TITLE		DATE	CAPACITY OR TITLE		DATE
Director, Int'l Barley Research		8/22/03	Senior Director Research		8/22/03

## EXHIBIT A

## ORIGIN AND BREEDING HISTORY OF COLLINS

**PEDIGREE:** Gimpel/3/Kimberley//Klages/Summit

**Date of Cross:** 1989

**History:**

The cross Gimpel/3/Kimberley//Klages/Summit was made in the greenhouse in Fort Collins, CO in March, 1989. The F1 was grown out in the greenhouse in the Spring of 1990. Since there is no segregation in the F1 no selections were made. The F2 generation was grown in a field during the summer of 1990 in Idaho Falls, ID. individual plants were selected based on the following criteria: Straw strength, Maturity, and general foliar disease resistance. One generation of single seed decent (SSD) was carried out in the greenhouse in Fort Collins during the winter of 1990/1991 with no selection. Heads generated from SSD were planted in Idaho Falls in 1991 with a remnant saved on the shelf in Ft. Collins. In 1993 head from the remnant bag was planted in Idaho Falls to re-select from the cross lines for the International breeding program. Row PY1-2616 was selected and the grain harvested. The seed from this selection was planted in 2 locations in France in 1994 with the line identification of Z060Y018C. European selection criteria is listed below.

**Agronomic traits:**

Yield  
Straw strength (lodging)  
Height  
Maturity  
Test weight  
Resistance to scald  
Resistance to net blotch  
Resistance to powdery mildew

**Malting traits:**

Kernel plumpness  
Extract Level  
Total protein  
Soluble protein  
Alpha amylase  
Diastatic power  
Wort viscosity  
Turbidity

Generally, the comparison was made between this line and several European check varieties including Vodka, Volga, and Nevada.

Eight heads from this line were picked from a plot grown in Valenciennes, France and were planted in headrows in Fort Collins in 1995. One headrow from the eight headrows was selected for uniformity and yield and was harvested. The rest of the headrows were bulk to provide seed for yield trials in Europe. Seed from that selected headrow was grown in a micro-multiplication (MM) plot in Balcarce, Argentina in 1996. The seed was bulked and supplied yield trial seed in Europe and a portion of the seed of the bulk was grown in Fort Collins in 1997 in a MM plot. 150 heads were selected from the Ft. Collins MM plot and the rest of the MM was bulked to provide yield trial seed in Europe in 1998 and 1999. Twenty heads from the 150 heads selected in 1997 were grown in Ft. Collins headrows in 1999. Three headrows out the twenty were selected for uniformity, closely resembles the bulk of the line grown adjacent to the headrows and yield. Heads from the three selected headrows were hand harvested separately. Heads from the three head rows were grown in Fort Collins in 2000 in a nested headrow design. 32 heads from each of the three selected 1999 headrow sources were grown side by side in headrows with the bulk of the line grown on the left and right side sides of the headrows. Three rows were selected from each headrow source to provide the three sources of headrows to be planted in Ft. Collins in 2002. The bulk around the Nested Headrows was bulked to provide seed for yield trials in Europe. In Ft. Collins 2002, 32 heads from each of the three headrows sources were grown in a nested headrow design where seed from the 2000 bulk from the 2000 NHR of the line were grown on the left and right sides of the head rows with the three sources planted adjacent to each other in the middle. The three sources were examined for uniformity of the headrows and resemblance to the bulk. Headrow not matching the criteria were discarded. At harvest the source that most resembles the bulk was selected and the remaining headrows from that source were bulked. The bulked headrows constitute the Pre-Breeder Seed. The surrounding bulk planted on the left and right side of the three sources was harvested to provide yield trial seed in Europe. The Pre-Breeder seed was grown in Yuma Arizona during the winter of 2002/2003 to provide breeder seed.

2003 00324

Our most important agronomic traits are yield, straw strength and disease resistance. Our most important malting traits are extract level, protein and enzyme levels (alpha amylase and diastatic power).

This line is targeted as a two-rowed malting barley for European barley production. Breeder seed will be maintained in Ft Collins. Collins has been uniform and stable from F6 through F10(Breeder Seed). Less than .005% of the plants were eliminated from the field in 2002. Approximately 95% of the rogued plots were 2 to 4 centimeters taller than Collins. Less than .05% total variant plants may be encountered in subsequent generations. Certified seed will be available 2005 pending Industry recommendation for use.

**EXHIBIT B****STATEMENT OF DISTINCTNESS**

Collins is most similar to the spring barley variety "B1202", however it can be distinguished by the following morphological characteristics:

- Collins is a midseason spring barley.  
B1202 is an early season spring barley.
- Collins has a mid-lax head.  
B1202 has a lax head.
- Collins has glume hair confined to a band.  
B1202 glumes are completely covered with hair.
- Collins has a prostrate juvenile growth habit.  
B1202 has a erect juvenile growth habit.
- Collins seed length is short to mid-long.  
B1202 seed length is mid-long to long.
- Collins collar shape is a cup.  
B1202 collar shape is V-shaped.

U.S. DEPARTMENT OF AGRICULTURE  
 AGRICULTURAL MARKETING SERVICE  
 LIVESTOCK AND SEED DIVISION  
 BELTSVILLE, MARYLAND 20705

EXHIBIT C  
 (Barley)

OBJECTIVE DESCRIPTION OF VARIETY  
 BARLEY (*HORDEUM VULGARE*)

INSTRUCTIONS: See Reverse

NAME OF APPLICANT(s)

BUSCH AGRICULTURAL RESOURCES, INC.

FOR OFFICIAL USE ONLY

 PVP NUMBER  
 200300324

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

3515 EAST COUNTY ROAD 52  
 FT. COLLINS, CO 80524 USA

VARIETY NAME OR TEMPORARY  
 DESIGNATION  
 COLLINS

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (i.e.   or   when number is either 99 or less or 9 or less.

## 1. GROWTH HABIT:

1= SPRING 2= FACULTATIVE WINTER 3= WINTER  Early Growth: 1= PROSTRATE 2= SEMIPROSTRATE  
 3= ERECT

## 2. MATURITY (50%) Flowering):

1= EARLY (California Mariout) 2= MIDSEASON (Betzes) 3= LATE (Frontier)

No. of days Earlier than .....  1= BETZES 2= CALIFORNIA MARIOUT 3= CONQUEST 4= DICKSON

No. of days Later than .....  5= PIROLINE 6= PRIMUS 7= UNITAN 8= B1202

## 3. PLANT HEIGHT (From soil level to top of head):

1= SEMIDWARF 2= SHORT (California Mariout) 3= MEDIUM TALL (Betzes) 4= TALL (Conquest)

Cm. Shorter than .....  1= BETZES 2= CALIFORNIA MARIOUT 3= CONQUEST 4= DICKSON

Cm. Taller than .....  5= PIROLINE 6= PRIMUS 7= UNITAN 8= B1202

## 4. STEM:

Exertion (Flag to spike at maturity): 1 = 0 - 3 cm. 2 = 3 - 10 cm.  Anthocyanin: 1= ABSENT 2= PRESENT  
 3 = 10 - 15 cm.

NO. OF NODES (Originating from node above ground)

Collar Shape: 1= CLOSED 2= V-SHAPED 3= OPEN  Shape of Neck: 1= STRAIGHT 2= SNAKY  
 4= MODIFIED CLOSED OR OPEN 5= Saucer 3= OTHER (Specify)

## 5. LEAF:

Basal leaf sheath (seedling): 1= GLABROUS 2= PUBESCENT  Position of flag leaf (at boot stage): 1= DROOPING  
 2= UPRIGHT

Waxiness: 1= ABSENT (Glossy) 2= SLIGHTLY WAXY  
 3= WAXY

MM. WIDTH (First leaf below flag leaf)

CM. LENGTH (First leaf below flag leaf)

Anthocyanin in leaf sheath: 1= ABSENT 2= PRESENT

## 6. HEAD:

Type: 1= TWO-ROWED 2= SIX-ROWED

Shape: 1= TAPERING 2= STRAP 3= CLAVATE  
 4= OTHER (Specify) PARALLEL

Lateral Kernels Overlap: 1= NONE 2= AT TIP  
 3= 1/4 - 1/2 OF HEAD

Density: 1= LAX 2= ERECT (Not dense)  
 3= ERECT (Dense) 4= MID-LAX

Waxiness: 1= ABSENT (Glossy) 2= SLIGHTLY WAXY  
 3= WAXY

Rachis (Hair on edge): 1= LACKING 2= FEW 3= COVERED

## 7. GLUME:

Length: 1= 1/3 OF LEMMA 2= 1/2 OF LEMMA  
 3= MORE THAN 1/2 OF LEMMA

Hair covering: 1= NONE 2= RESTRICTED TO MIDDLE 3= CONFINED TO BAND 4= COMPLETELY COVERED

Awns: 1= LESS THAN EQUAL TO LENGTH OF GLUMES 2= EQUAL TO LENGTH OF GLUMES  
 3= MORE THAN EQUAL TO LENGTH OF GLUMES

Awn Surface: 1= SMOOTH 2= SEMISMOOTH 3= ROUGH

2003 00324

2003 00324

## 8. LEMMA:

- ☐ 5 Awn: 1= AWNLESS 2= AWNLETS ON CENTRAL ROWS, AWNLESS ON LATERAL ROWS  
3= SHORT ON CENTRAL ROWS, AWNLETS ON LATERAL ROWS 4= SHORT (less than equal to length of spike)  
5= LONG (longer than spike) 6= HOODED
- ☐ 4 Awn Surface: 1= AWNLESS 2= SMOOTH 3= SEMISMOOTH 4= ROUGH
- ☐ 3 Teeth: 1= ABSENT 2= FEW 3= NUMEROUS ☐ 1 Hair: 1= ABSENT 2= PRESENT
- ☐ 1 Shape of Base: 1= DEPRESSION 2= SLIGHT CREASE 3= TRANSVERSE CREASE ☐ 2 Rachilla Hairs: 1= SHORT 2= LONG

## 9. STIGMA:

- ☐ 2 Hairs: 1= FEW 2= MANY

## 10. SEED:

- ☐ 2 Type: 1= NAKED 2= COVERED ☐ 1 Hairs on Ventral Furrow: 1= ABSENT 2= PRESENT
- ☐ 2 Length: 1= SHORT (8.0 mm.) 2= SHORT TO MIDLONG (7.5-9.0 mm.) 3= MIDLONG (8.5-9.5 mm.)  
4= MIDLONG TO LONG (9.0-10.5 mm.) 5= LONG (10.0 mm.)
- ☐ 2 Wrinkling of Hull: 1= NAKED 2= SLIGHTLY WRINKLED 3= SEMIWRINKLED 4= WRINKLED
- ☐ 1 Aleurone Color: 1= COLORLESS (White or Yellow) 2= BLUE
- ☐ 0 ☐ 0 PERCENT ABORTIVE ☐ 3 ☐ 5 GMS. PER 1000 SEEDS

## 11. DISEASE: (0= Not Tested, 1= Susceptible, 2= Resistant)

- ☐ 0 SEPTORIA ☐ 3 NET BLOTCH ☐ 0 SPOT BLOTCH ☐ 2 POWDERY MILDEW
- ☐ 0 LOOSE SMUT ☐ 0 BACTERIAL BLIGHT ☐ 0 COVERED SMUT ☐ 0 FALSE LOOSE SMUT
- ☐ 0 STEM RUST ☐ 0 LEAF RUST ☐ 0 SCAB ☐ 3 SCALD
- ☐ 0 AY ☐ 0 BSMV ☐ 0 BYDV ☐ 0 OTHER (Specify)

## 12. INSECT: (0= Not Tested, 1= Susceptible, 2= Resistant)

- ☐ 0 GREEN BUG ☐ 0 ENGLISH GRAIN APHID ☐ 0 CHINCH BUG ☐ 0 ARMYWORM
- ☐ 0 GRASS HOPPERS ☐ 0 CERIAL LEAF BEETLE ☐ 0 OTHER (Specify): \_\_\_\_\_
- HESSIAN FLY RACES ☐ GP ☐ A ☐ B ☐ C
- ☐ D ☐ E ☐ F ☐ D

## 13. CHEMICAL: (0= Not Tested, 1= Susceptible, 2= Resistant)

- ☐ 0 DDT ☐ OTHER (Specify): \_\_\_\_\_

## 14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	B1202	Seed size	B1202
Leaf size	B1202	Coleoptile elongation	B1202
Leaf color	B1202	Seedling pigmentation	B1202
Leaf carriage	B1202		

REFERENCES: The following publications may be used as a reference aid for the standardization of character descriptions and terms used in this form:

- Wiebe, G.A., and D.A. Reid, 1961, Classification of Barley Varieties Grown in the United States and Canada in 1958, Technical Bulletin No. 1224, U.S. Dept. of Agriculture.
- Reid, D.A., and G.A. Wiebe, 1968, Barley: Origin, Botany, Culture, Winter Hardiness, Genetics, Utilization, Pests, Agriculture Handbook No. 338, U.S. Dept. of Agriculture. pp. 61-84.
- Malting Barley Improvement Association, Milwaukee, Wisconsin, 1971, Barley Variety Dictionary.

COLOR: Nickerson's or any recognized color fan may be used to determine color of the described variety.

**EXHIBIT D****BOTANICAL DESCRIPTION OF COLLINS**

Collins is a two-rowed, mid-season spring barley bred and developed by Busch Agricultural Resources, Incorporated, Ft. Collins, Colorado. It has excellent malting quality.

Juvenile growth habit is prostrate. Plant color at boot is green with an upright flag leaf. Head shape is parallel and mid-lax in density with a slightly nodding head type. Neck is straight with a cup collar. First rachis segment is long and narrow. Base of the first segment is a margin flange with hairs on the margin. Rachis shape is plain with shoulder hairs and hair at the base of the concave. Long hairs cover the edge of the rachis. Glume length is one half the length of the kernel and glume hair is long and confined to a band. The glume awns are rough and equal to the length of the glume. Lemma awns are rough, longer than the spike and persistent. Lemma teeth are frequent. Lemma hair is absent and the base is a depression. Lateral floret formation is divergent with blunt lemma tips. Seed is covered, short to mid-long, finely wrinkled with wax present and the aleurone is colorless. Palea tips are ling and V-shaped. Rachilla length is one-third the length of the kernel with long hair all over. Ventral crease is open and lacks crease hairs.

Collins is a European two-rowed variety well adapted to Spain, and France.

(Z060Y018C)

Spain

2003 00324

## Agronomic Summary

Line or Variety	Yield (% B1202)				(5)	(16)	(5)	(5)	(2)	(6)	(9)	(7)
	(1)	(2)	(2)	(6)						Net	Powery	
	1998	1999	2000	2001	2002	Avg	HD	Hgt	Ldg	Blotch	Mildew	Scald
B018C	137	130	106	109	118	117	123	84.3	1.0	3.3	1.1	2.5
B1202	100	100	100	100	100	100	121	86.5	2.3	2.5	3.1	3.0
	(7.1) *	(4.8)	(6.6)	(3.5)	(5.8)	(5.0)						

1998-2002 Data, ( ) = Station Years

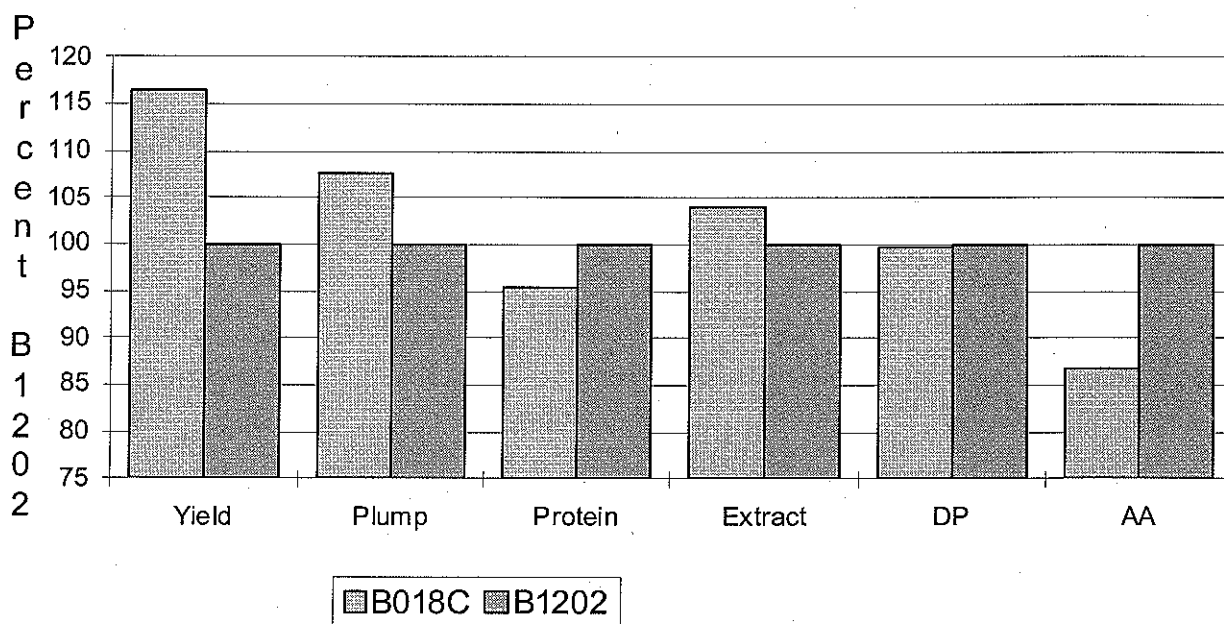
\* Metric Ton / Hectare

## Quality Summary

Line or Variety	(8)	(10)	Extract		(6)	(4)	(10)	(10)	(10)	(10)	Wort	
			F.	C.							(2)	(10)
	%	Malt	Grind	Grind	F-C	Wort	S/T	Sol	DP	AA	Color	Turb
B018C	71.2	12.8	78.0	76.1	2.62	1.52	37.0	4.7	127	52.3	1.9	10
B1202	66.3	13.4	76.8	73.2	3.04	1.53	38.0	5.1	128	60.3	1.7	14

1996-2001 Data, ( ) = Station Years

## B018C



U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)  BUSCH AGRICULTURAL RESOURCES, INC.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER  Z060Y018C	3. VARIETY NAME  COLLINS
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)  3515 EAST COUNTY ROAD 52 FORT COLLINS, CO 80524 USA	5. TELEPHONE (include area code)  (970) 221-5622	6. FAX (include area code)  (970) 472-2334
7. PVPO NUMBER <b>2003 00324</b>		
8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain.  <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
9. Is the applicant (individual or company) a U.S. national or U.S. based company? If no, give name of country _____  <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
10. Is the applicant the original breeder? If no, please answer the following:  a. If original rights to variety were owned by individual(s): Is (are) the original breeder(s) a U.S. national(s)? If no, give name of country _____  <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO  b. If original rights to variety were owned by a company: Is the original breeder(s) U.S. based company? If no, give name of country _____  <input type="checkbox"/> YES <input type="checkbox"/> NO		
11. Additional explanation on ownership (If needed, use reverse for extra space):		

**PLEASE NOTE:**

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original breeder, both the original breeder and the applicant must meet one of the above criteria.

The original breeder may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter.

Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-2791.

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

**EXHIBIT E.**

**STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP**

Busch Agricultural Resources, Incorporated is applicant for protection in this case being:

- a.) The incorporated business registered in Delaware for and within regular employees have bred Collins.
- b.) The proprietary owner and intending commercial seller of Collins.